



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,265	10/02/2003	Edward J. Krolczek	2507-8637.1US (22235-US-0)	3460
60794	7590	09/17/2009	EXAMINER	
TRASKBRITT, P.C./ ALLIANT TECH SYSTEMS P.O. BOX 2550 SALT LAKE CITY, UT 84110			CIRIC, LJILJANA V	
		ART UNIT	PAPER NUMBER	
		3744		
		NOTIFICATION DATE	DELIVERY MODE	
		09/17/2009	ELECTRONIC	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

USPTOMail@traskbritt.com

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/676,265	KROLICZEK ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Ljiljana (Lil) V. Ciric	3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 06/17/09, 05/20/09, 12/31/08, 08/19/08.

2a) This action is **FINAL**.                                   2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-3,5-66,74 and 77-86 is/are pending in the application.

4a) Of the above claim(s) 1-3,5-66,74,77,78,80-82 and 86 is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 79 and 83-85 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 28 March 2008 is/are: a) accepted or b) objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All   b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date See Continuation Sheet.

4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.

5) Notice of Informal Patent Application

6) Other: \_\_\_\_\_.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :05/17/2004, 12/03/2004, 07/27/2005, 09/25/2008, 02/05/2009.

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election without traverse of the fifth species or the embodiment of Figures 11, 12A, 12B, 13, and 14A through 19D in the replies filed on August 19, 2008 and on December 31, 2008. Upon careful reconsideration, because the fifth species or the embodiment of Figures 11, 12A, 12B, 13, and 14A through 19D clearly does not include a secondary wick by disclosure as already previously noted in the Notice of Non-Compliant Amendment mailed on December 11, 2008, ONLY claims 79 and 83 through 85 are readable thereon and are being examined herewith.
2. Please note that the examiner's Interview Summary mailed on May 15, 2009 corresponding to the telephonic interview made on May 11, 2009 incorrectly stated that claim 66 is also readable on the elected species and would be examined; this statement is rescinded hereby in view of the amendments to claim 66 adding limitations referring to a secondary wick. Please also note that applicant's interview summary as filed on May 20, 2009 incorrectly appears to imply that it was somehow agreed that all of claims 1 through 3, 5 through 36, 38 through 66, 74, and 78 through 85 would be examined as being readable on the elected fifth species or the embodiment of Figures 11, 12A, 12B, 13, and 14A through 19D; no such agreement was made via the telephonic interview on May 11, 2009 and applicant's interview summary is therefore deficient as well.
3. Claims 1 through 3, 5 through 66, 74, 77, 78, 80 through 82, and 86 are thus hereby withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to the various nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the replies filed on August 19, 2008 and on December 31, 2008.

### *Information Disclosure Statement*

4. The information disclosure statements (IDS) submitted on May 17, 2004, on December 3, 2004, on July 27, 2005, on December 7, 2005, on September 25, 2008, and on February 5, 2009 (as amended

based on the additional information supplied via the material filed on June 17, 2009) were all filed before the mailing date of the first Office action on the merits. The submissions are thus in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements are being considered by the examiner.

***Drawings***

5. The replacement drawings were received on March 28, 2008. These drawings are hereby approved.

***Specification***

6. The abstract of the disclosure is objected to because the claims being examined herewith as being drawn on the elected species are drawn to a process, whereas the abstract fails to summarize the corresponding inventive steps as required. Correction is required. See MPEP § 608.01(b).

7. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

***Claim Objections***

8. Claims 79, and 83 through 85 are objected to because of the following informalities, for example: “a primary wick” [claim 79, line 5] should be replaced with “the primary wick” for improved clarity; “to offset liquid vaporized” [claim 85, lines 2-3] should be replaced with “to offset *any* liquid vaporized”; and, “liquid vaporized” [claim 85, lines 3-4] should be replaced with “*any* liquid vaporized”, both for improved readability and grammatical correctness. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 79 and 83 through 85 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With regard to base claim 79 as written, it appears that the limitation “within the liquid flow channel” in line 9 of the claim is erroneously recited as such and should be replaced with “within the vapor removal channel” or similar; it does not appear that any vapor is disclosed as being formed within the liquid flow channel.

The term “near” in claim 79 is a relative term which renders the claim indefinite. The term “near” is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Thus, as used to qualify the relative location of the vapor formation, the term “near” renders the same indeterminate and the intended scope of protection sought by claim 79 and all claims depending therefrom indefinite.

Similarly, the term “significant” in claim 84 is a relative term which renders the claim indefinite. The term “significant” is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of

the scope of the invention. Thus, as used to qualify the order of magnitude of the pressure drop, the term "significant" renders the same indeterminate and the intended scope of protection sought by the claim indefinite.

With regard to claim 83 as written, the limitations "further comprising reducing leakage of heat from the vapor barrier wall, through the primary wick, toward the liquid barrier wall" appear to have one or more words missing therefrom, thus further rendering indefinite the intended scope of protection sought by the claim. In particular, either an "and" is missing immediately preceding "toward the liquid barrier wall" or else an entire limitation following "toward the liquid barrier wall" has inadvertently been omitted.

***Claim Rejections - 35 USC § 102***

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. As best can be understood in view of the indefiniteness of the claims, claims 79 and 83 through 85 are rejected under 35 U.S.C. 102(b) as being anticipated by Baker (U.S. Patent No. 5,816,313).

Baker discloses a method of transferring heat essentially as claimed, including, for example: inputting heat energy from heat generating equipment Eq. 8 on a cold plate 10 onto an exterior heat-absorbing surface of a vapor barrier wall of an evaporator 11; flowing liquid through a liquid flow channel 36 that is defined between a liquid barrier wall at the bottom of evaporator 11 and a primary wick 16; flowing the liquid upwards (i.e., "pumping" the liquid at least as broadly interpreted as required) from the liquid flow channel 36 through the primary wick 16 positioned between the liquid barrier wall and the vapor barrier wall; evaporating at least some of the liquid at a vapor removal channel 18 that is defined at an interface between the primary wick 16 and the vapor barrier wall; and delivering vapor formed near or

within the liquid flow channel 36 away from the primary wick 16 as shown by the arrows in Figures 1a and 1b, for example. That portion of housing 12 which is in contact with the liquid is readable on the liquid barrier wall as recited in the instant claims, wherein that portion of housing 12 which is in contact with the vapor is readable on the vapor barrier wall as also recited in the instant claims. Fluid reservoir 38 ensures that enough liquid is supplied to the primary wick 16 to offset any vaporized liquid.

The reference thus reads on the claims.

***Conclusion***

13. The additional prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ljiljana (Lil) V. Cricic whose telephone number is 571-272-4909. The examiner works a flexible work schedule but can normally be reached on most days during the work week between the hours of 10:30 a.m. and 6:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl J. Tyler can be reached on 571-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system.

Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

Art Unit: 3744

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ljiljana (Lil) V. Cric/

Primary Examiner, Art Unit 3744